

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-009866**Date Inspected:** 04-Oct-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Guo Yan Fei, Mr. Zhu Tian Shu

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

**OBG Bay 2**

This QA Inspector observed ZPMC welder Ms. Gao Xiue, stencil 206358 has used welding procedure specification WPS-B-T-2132-3 to make floor beam flux cored weld FB3047-001-061. This QA Inspector observed that ZPMC Quality Control Inspector Mr. Zhan Hai Feng had recorded Ms. Gao Xiue to have a welding current of 305 amps, 30.4 volts and this QA Inspector measured Ms. Gao Xiue to have a welding current of 300 amps and 27.5 volts. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

**OBG BAY 9**

This QA Inspector observed ZPMC welder Mr. Xu Guo Xin, stencil 059443 is using flux cored welding procedure WPS-B-T-2133 to make deck plate weld DP3063-001-234. This weld attaches a stiffener plate to the inside of closed rib for OBG deck panel DP3063-001. This QA Inspector observed the base material had been cleaned of

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oxides where the stiffener welds are to be installed. This QA Inspector observed a welding current of approximately 190 amps 24.6 volts and Mr. Xu Guo Xin is certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

### OBG Bay 13

This QA Inspector observed ZPMC welder Ms. Li Jiao, stencil 049861 is using shielded metal arc welding procedure specification WPS-B-P-2211-B-U2-FCM-1 to make tack weld SEG066A-008 which attaches side plate SP380A to SP353A. This QA Inspector observed a welding current of approximately 170 amps. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC has positioned a floor beam assembly consisting of FB003-184, SSD16-PP98, FB014-043 on a deck plate near the front of OBG Bay 13 at panel point 98 of the partially assembled OBG. This QA Inspector observed ZPMC has tack welded two support rod anchor plates to the top of bottom plate "T" stiffeners adjacent to panel point 98 and the floor beam assembly does not appear to have been tack welded to the deck plate. This QA Inspector observed ZPMC appears to be preparing to tack weld this floor beam assembly to the deck plate. This QA Inspector asked the job supervisor if there are any ZPMC QC welding Inspectors in bay 13 and the job supervisor did not appear to understand or speak the English Language. This QA Inspector observed ZPMC proceeded to use the overhead crane to remove the floor beam assembly and position it laying down on the OBG bottom plates near panel point 97. After this had been laid down the ZPMC workers appeared to be ending their work shift and they picked up their tools and they left the area. See the photographs below for additional information.

### OBG Bay 14

This QA Inspector observed ZPMC QC representative Mr. Zhong Guo Hui sitting near the front of the OBG where several of the segments are welded together including deck plate DP475-001. Mr. Zhong Guo Hui informed this QA Inspector that no ZPMC welders are working inside of the segments near the front of OBG Bay 14. This QA Inspector looked into the interior of the OBG segment and observed ZPMC welder Mr. Yang Yunfeng, stencil 049861 is using shielded metal arc welding process to weld diaphragm plates to deck panel DP475-001 closed ribs.

This QA Inspector asked Mr. Zhong Guo Hui if he was aware of Mr. Yang Yunfeng welding inside of the segments and Mr. Zhong Guo Hui informed this QA Inspector Mr. Yang Yunfeng appears to have just started welding and that he will now go monitor this welding. This QA Inspector observed Mr. Zhong Guo Hui has a welding current of approximately 150 amps. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Yun Chuan Shan, stencil 050316 is using flux cored welding process to make OBG weld SEG063A-001 between a base plate and a side plate. This QA Inspector observed a welding current of approximately 260 amps and 31 volts. This QA Inspector verified Mr. Yun Chuan Shan is certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

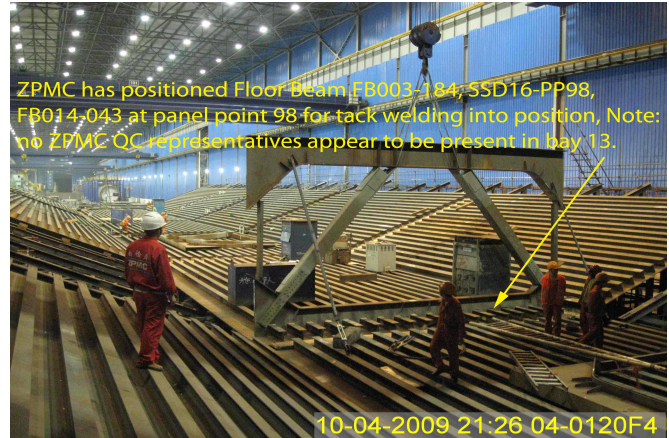
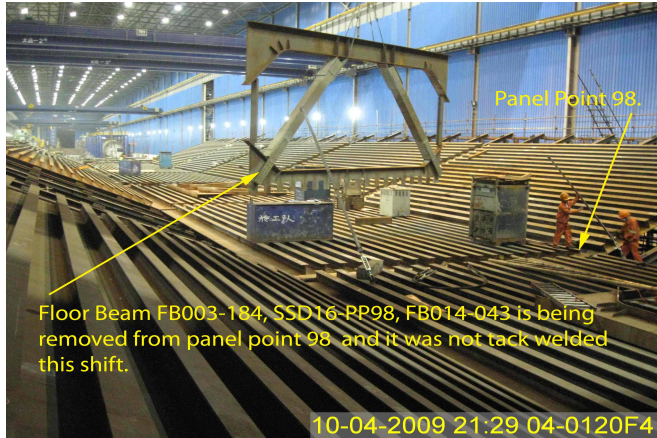
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This QA Inspector observed ZPMC welder Mr. Sun Hailong, stencil 204616 is using flux cored welding procedure WPS-B-T-2112 to tack weld diaphragm plates to deck plate DP129-001. The QA Inspector observed a welding current of approximately 145 amps. This QA Inspector observed that Mr. Sun Hailong is certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.



### Summary of Conversations:

See Above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Dawson,Paul	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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